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TWO NEW THYSANOPTERA FROM PORTO RICO

By J. DOUGLAS HOOD

The thrips of Porto Rico are almost entirely unknown. The only record of any named species occurring on the island seems to be in a footnote of a recent paper by H. M. Russell, in which he states that *Mesothrips ficorum* Marchal "causes injury to various species of Ficus in Key West, Cuba, and Porto Rico." Below, two additional species, both new, are described from material generously referred to me by Mr. Russell. They were collected by Mr. Thomas H. Jones, of the Estación Experimental de la Asociación de Productores de Azúcar, Rio Piedras, Porto Rico, and are of interest in increasing our scant knowledge of the Neotropical Thysanoptera.

Suborder TEREBRANTIA Haliday

Family THRIPIDÆ Haliday

Genus HETEROTHRIPS Hood

Aug. 22, 1908.—Heterothrips Hood, Bull. III. State Lab. Nat. Hist., Vol. VIII, Art. II, p. 361; type, H. arisæmæ Hood (monobasic).

Dec. 5, 1908.—Phyllothrips Buffa, Redia, Vol. V, fasc. 1, p. 123; type, P. pilosus Buffa (monobasic). (Nec Phyllothrips Hood, Can. Ent., Vol. XL, No. 9, p. 305, Sept., 1908.)

1910.—Heterothrips Bagnall, Ann. Soc. Ent. Belg., Tome LIV, p. 461.

1912.—Phyllothripsiolus Strand, Int. Ent. Zeitschr., 5 Jahrg., No. 40, p. 287.

1912.—Heterothrips Bagnall, Ann. Mag. Nat. Hist., ser. 8, Vol. X, p. 222. (Erects the family Heterothripidæ.)

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¹The Red-Banded Thrips. Bull. 99, Pt. II, Bur. Ent., U. S. Dept. Agr., pp. i-iv, 17-29, Pls. IV, V, Dec. 14, 1912.



each with about 33 spines, which are shorter and closer together toward base. Legs of first two pairs yellow, rarely with femora lightly shaded with brown; posterior legs brown, tarsi and extremities yellowish.

Abdomen stout, lanceolate, and, except under wings, with close transverse striæ and dense minute pubescence as in *Sericothrips*; posterior margin of segments 1–8 prolonged into numerous, minute, slender spines, except for a brief space each side of the dorsal median line of segments 2–5, and the entire median region, both above and below, of segment 1.

Measurements: Length 1.14 mm.; head, length 0.104 mm., width 0.132 mm.; prothorax, length 0.124 mm., width 0.212 mm.; pterothorax, width 0.264 mm.; abdomen, width 0.348 mm. Antennal segments: 1, 21μ ; 2, 38μ ; 3, 69μ ; 4, 45μ ; 5, 36μ ; 6, 33μ ; 7, 17μ ; 8, 18μ ; 9, 15μ ; total length of antenna, 0.29 mm.; width at segment 4, 0.022 mm.

Male.—Length about 0.94 mm. Color orange yellow; head brown, darker in front; abdominal segments grayish above; legs pale grayish yellow; antennal segments 2–5 largely pale yellowish gray, 3 and 4 orange at apex; wings of fore pair dark brownish gray, much paler in basal fourth. In structure much like female.

Measurements of allotype: Length 0.936 mm.; head, length 0.100 mm., width 0.128 mm.; prothorax, length 0.108 mm., width 0.168 mm.; pterothorax, width 0.216 mm.; abdomen, width 0.168 mm. Antennal segments: 3, 66 μ ; 4, 45 μ ; 5, 33 μ ; 6, 34 μ ; 7, 17 μ ; 8, 18 μ ; 9, 15 μ .

Described from 33 females and 4 males, taken in flowers of Guava (*Psidium guajava* L.), Rio Piedras, Porto Rico, June 11, 1912, by T. H. Jones.

This is a very distinct species, the silky pubescence and transversely striate prothorax separating it at once from arisæmæ, salicis, and decacornis. Buffa's briefly described pilosus, from Paraguay, differs in the globose form of segments 5–9 of the antennæ and the larger fourth segment.

Suborder TUBILIFERA Haliday Family PHLŒOTHRIPIDÆ Uzel

Genus PODOTHRIPS nov.

($\Pi o \dot{\nu}_{\mathcal{S}}$, the foot; $\theta \rho \dot{\nu}_{\mathcal{S}} \psi$, a wood worm)

Body depressed, glabrous. Head longer than wide, much narrowed toward base, widest behind eyes, about equal in length to prothorax,

evenly declivous in front, emarginate above at base; cheeks finely roughened, without spiniferous tubercles. Eyes less than one-third as long as head, half as wide as their interval. Ocelli placed far forward, the median one between basal segments of antennæ; posterior ocelli most widely separated. Antennæ 8-segmented, the last two segments not compactly united. Mouth cone blunt, much shorter than its width at base. Prothorax about as long as head, more than twice as wide at base as at apex, lobed behind, with median dorsal thickening, lateral outline concave. Legs of moderate length, stout; fore femur nearly as long and broad as head; fore tibia with a stout tooth at tip in both sexes; fore tarsus armed with a long, stout tooth. Wings slender, narrowed at middle; fringe sparse and weak, on fore wing not double along posterior margin near apex.

Type: Podothrips semiflavus, sp. nov.

The long prothorax and narrowed wings ally this genus very closely to *Haplothrips* Amyot et Serville, from which it is separable in both sexes by the armed fore tibia and tarsus, the enlarged fore femur, the form of the head and prothorax, and the sparse, simple fringe of the fore wing. The tibial tooth suggests *Kladothrips*, *Oncothrips*, *Onychothrips*, and *Plectrothrips*.

Podothrips semiflavus, sp. nov. (Pl. I, figs. 3-5).

Female.—Length about 1.6 mm. Surface shining. Color golden yellow, with head, sides of metathorax, and last three abdominal segments abruptly dark blackish brown; abdominal segments 3–8 with a transversely elongate dark spot above, near base; legs yellow; antennæ yellow, usually with segment 1, sides of segment 2, apex of 5 and 6, and all of 7 and 8 darkened with brown.

Head 1.2 times as long as wide, broadest slightly behind eyes, thence narrowing roundly and abruptly to base, where there is a slight neck-like constriction; vertex rounded and evenly declivous; dorsal surface without sculpture; cheeks finely roughened, sparsely and briefly spinose; postocular bristles pointed, three-fifths as long as eyes. Eyes less than one-third as long as head, separated by twice their width, not protruding, ventral extent very slightly less than dorsal. Ocelli anterior in position, the posterior pair one and two-thirds times as far from each other as from the

¹ This name is spelled "Plectothrips" by Moulton on pages 12 and 31 of his "Synopsis, Catalogue, and Bibliography of North American Thysanoptera," Tech. Ser. 21, Bur. Ent., U. S. Dept. Agr. The error should be noted and corrected.

median ocellus. Antennæ nearly 1.6 times as long as head, moderately slender; segment I nearly as broad at base as long; 2 slenderer than I, two-thirds as broad as long; 3 clavate, narrower than 2, twice as long as wide; 4–6 nearly similar in form to 3, successively decreasing in length and breadth; 7 elongate, slender, about two and one-half times as long as broad and two-thirds as wide as 3; 8 subconical, slightly narrowed at base, two-thirds as long as 7; sense cones short and weak.

Prothorax very slightly shorter than head and (inclusive of coxæ) twice as wide at base as at apex and 0.7 as long as wide; lateral outline concave; surface smooth; median dorsal line distinctly chitinized; all usual bristles present, the anterior marginals greatly reduced; anterior angulars and midlaterals pointed, one-third as long as postoculars; posterior angular and coxal longest, fully equal to postoculars, capitate; posterior marginals shorter, pointed. Pterothorax about as wide as base of prothorax, sides nearly straight, converging posteriorly. Legs stout, of moderate length; fore femur equal in length to head, 1.6 times as long as broad; fore tibia stout, scarcely as long as width of femur, with a stout, prominent tooth on inner side of apex; fore tarsus with a long, strong, curved tooth about three-fifths as long as tarsus. Wings long, slender, weak, colorless, without double subapical fringe.

Abdomen slender, slightly wider than pterothorax. Tube about 0.6 as long as head, basal fourth slightly swollen and twice as wide as the somewhat constricted apex; terminal bristles brown, one and one-half times as long as tube; all other abdominal bristles pale.

Measurements of holotype (female): Length 1.6 mm.; head, length 0.228 mm., width 0.188 mm.; prothorax, length 0.216 mm., width at apex 0.150 mm., at base 0.292 mm.; pterothorax, width 0.312 mm.; abdomen, width 0.336 mm.; tube, length 0.138 mm., width at base 0.064 mm., at apex 0.032 mm. Antennal segments: 1, 36μ ; 2, 46μ ; 3, 56μ ; 4, 51μ ; 5, 49μ ; 6, 44μ ; 7, 45μ ; 8, 30μ ; total length of antenna, 0.36 mm.; width at segment 3, 0.028 mm.

Male.—Smaller and slenderer than female (length about 1.3 mm.); otherwise nearly similar.

Measurements of allotype (male): Length 1.3 mm.; head, length 0.198 mm., width 0.161 mm.; prothorax, length 0.180 mm., width at apex 0.118 mm., at base 0.246 mm.; pterothorax, width 0.240 mm.; abdomen, width 0.240 mm.; tube, length 0.114 mm., width at base 0.053 mm., at apex 0.027 mm. Antennal segments: 1, 33 μ ; 2, 42 μ ;

3, 48μ ; 4, 44μ ; 5, 43μ ; 6, 40μ ; 7, 42μ ; 8, 29μ ; total length of antenna, 0.32 mm.; width of segment 3, 0.025 mm.

Described from eight females and three males, collected by Mr. T. H. Jones on "para grass" or "malojillo" (Panicum barbinode Trin.), at Guanica, Porto Rico, March 9, 1912. "It may be of interest to add that, accompanying this thrips between the leaf sheaths and stalks of the grass, there occurred a scale insect which Mr. E. R. Sasscer, of the Bureau of Entomology, U. S. Department of Agriculture, has identified as Odonaspis sp." [Jones, in litt.]. Mr. Sasscer has subsequently informed me that along with the aforementioned scale there occurred specimens of Targionia sacchari (Ckll.).

The coloration is somewhat suggestive of Zygothrips pallidus Hood, described from Texas. It is not at all closely allied to that species, however, nor to any other described one.

NOTES ON THE GENUS MIEZA WALKER, WITH DESCRIPTIONS OF THREE NEW SPECIES FROM COSTA RICA

(Lepidoptera, Yponomeutida)

By AUGUST BUSCK

In Volume II, pp. 142-144, of the excellent "Contributions to the Natural History of the Lepidoptera of North America," by Drs. William Barnes and J. H. McDunnough, is found an article on the hyponomeutid genus *Mieza* Walker, which needs some correction. Such is offered herewith from notes long in manuscript.

The authors have misunderstood the facts about the generic names Eustixia and Eustixis Hübner, when they surmise that the latter name is dropped because "not sufficiently characterized." Very few of Hübner's genera are sufficiently characterized from our present point of view, but they are not and cannot be dropped on that account. The authors state that otherwise the generic name Mieza Walker would fall as a synonym as before Eustixis Hübner, "which is sufficiently distinct from Eustixia to warrant its retention."

The facts are that the two names Eustixia and Eustixis were clearly intended by Hübner for but one genus and the different final letter is either a mere lapsus or an intended improvement in spelling. This is evi-